

Sticker  
Price

Sale/  
Discount

Sales  
Tax

Coupon

Pay for  
Item

Rebate

APR = 13%  
Comp. daily

Effective interest rate (APY)

$$APY = \left(1 + \frac{APR}{n}\right)^n - 1$$

$$APY = \left(1 + \frac{.13}{365}\right)^{365} - 1 = .14 \quad 14\%$$

$$APY \geq APR$$

APR<sub>i</sub> = 0%

Effective interest rate (introductory rate)

n<sub>i</sub> = 90

APR<sub>s</sub> = 18%

n<sub>s</sub> = 365 - n<sub>i</sub>  
275

$$\text{eff} = \left(1 + \frac{APR_i}{n}\right)^{n_i} \left(1 + \frac{APR_s}{n}\right)^{n_s} - 1$$

$$\left(1 + \frac{0}{365}\right)^{90} \left(1 + \frac{.18}{365}\right)^{275} - 1 = .145 \quad 14.5\%$$

$$\text{eff} \leq APR$$

## Markup Rate

Automobile

$$\frac{35000 - 28000}{28000} \times 100 = 25\%$$
$$\frac{\text{Sticker price} - \text{Invoice price}}{\text{Invoice price}} \times 100$$

Dealer markup

Sticker price - Invoice price

\$20/wk  
1 yr

Other purchases

$$\frac{1040 - 800}{800} \times 100 = 30\%$$
$$\frac{\text{Total paid} - \text{sticker/sale price}}{\text{sticker/sale price}} \times 100$$

Interest

Total paid - sticker/sale price